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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 16 1932

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REPORT FOR THE WEEK ENDING APRIL 16, 1932.

HAVRE:

For the season of the year, the past week was favorable for field work. Maximum temperatures were high for the first few days. The 52-year record was broken for the 13th and 14th, when the maximum reached 78 degrees. The minimum for the week was 33 degrees on the 15th. On the afternoon of the 14th the wind velocity was very high for about three hours. Russian thistles were again badly drifted, filling fences, some of which had been cleaned out twice this spring. There was some soil blowing on local farms but no damage on the station. The wind was followed by rain amounting to .22 inch with lower temperatures.

Prospects are now that stands of winter wheat at the best will be spotted and it seems certain that a few of the plots will need reseeding.

Plowing and cultivating for the seed bed of all spring crops on the rotations is completed. Seeding, to be preceded by a cultivation, will not be done for a few days yet. The early dates of seeding spring grain and millet were completed the last two weeks. Spring rye and barley seeded over a week ago are germinating slowly.

Crested wheatgrass has made an especially good growth to date this spring. It could have been pastured last week and is now large enough for fair grazing. Native grass is beginning to green but is too short for much grazing as yet.

Some of the shrubbery, including lilacs, spiraea, honeysuckle, and mock orange are beginning to show leaf. Some of the perennials are starting growth.

Director F. B. Linfield and Professor Louis Vinke, of the Montana Experiment Station, were at the station on the 11th.

JUDITH BASIN:

The past week has been favorable for field work. Growing conditions have also been favorable and all winter wheat, rye, perennial grasses and alfalfa have made good progress. Crested wheatgrass has been large enough for pasturing for over a week. All winter wheat and rye have survived the winter with better than average stands.

Spring plowing for small grains was completed the fore part of the week and with favorable weather conditions seeding will be done next week.

Other work of the week has consisted of raking and burning weeds, building fence, making replacements in the shelter belt and the cultivation of alfalfa and grasses.

Very little field work has been done in the community. Most of the farmers are awaiting the arrival of seed-loan money before starting work.

Maximum temperature, 77; minimum, 23; precipitation, trace.

HUNTLEY:

The weather has been favorable for field work throughout the week and as a result all tillage operations for early crops have been completed on the Dry-Land projects. Seeding has followed closely upon the completion of the seed beds and to date all crops with the exception of corn have been planted in the rotation field. Barley and peas have been drilled in the pasture rotations and some miscellaneous plots of spring wheat have been planted.

From the standpoint of tilth and surface moisture, the seed beds obtained this spring have been excellent and all seed was put into moist soil. Samples taken on a number of the plots have shown available moisture to a depth of about 18 inches.

Maximum temperatures have been unseasonably high during the past week. The warm weather has been accompanied by high winds on some days and the combination has made the winter wheat look dry. No measurable precipitation was received during the first half of April.

Maximum temperature, 80; minimum, 17; precipitation, trace.

SHERIDAN:

A light rain on April 3 delayed drying of the top soil so that field work generally on cultivated land of the station was not possible until April 7. One small field on sandy ground was plowed the 6th, and the first date-of-seeding spring grain were sown the 7th.

The greater part of the meadow land on the station was harrowed with the spring tooth harrow fitted with alfalfa teeth before work on other land was started. All fields for small grain for feed, and seed blocks of peas, barley, and oats were prepared and seeded before very much was done on the rotation field. Work in the rotations was begun the 11th and all seeding of early crops in that field was completed the 15th. In spite of waiting longer than usual to start this work, the land in the rotations was still rather wet for plowing, and the spring-plowed plots required considerable work to get them in condition to seed. The varieties of spring wheat were sown the 15th, and oats varieties to-day, 16th. The second date of seeding spring grain, and variety test with field peas, are being sown this afternoon, 16th. Garden seeds were received from the Cheyenne Station, and the most of the early seeding of vegetables completed. Replacement stock for shelterbelts was received from the Mandan Station. Sheep were sheared during the week.

Temperatures for the first half of April were considerably above the average for the station, the average mean for the 15 days being practically the same as last year. There was no precipitation of consequence, and wind movement was just about the average. The top soil dried rapidly during the last week. Cutworms have been found around volunteer winter wheat plants in soil that has been worked this spring, but so far none have been found where the ground has not been disturbed. Grass, alfalfa, and winter wheat have made a good growth to date. There was practically no winter killing of those crops, and much volunteer spring grain lived over the winter.

Maximum temperature, 79 on the 14th; minimum, 25 on the 7th; precipitation, .59 inch, (all in light showers).

DICKINSON:

Seasonable temperatures prevailed, the mean being slightly above normal. A light rain fell on Thursday night and Friday morning.

Oats were seeded on April 11, completing the early seeding on the rotations.

Dickinson, continued:

Increase fields of Hannchen and Steigum barley were seeded on fallow on April 14.

Wheat varieties were seeded on the 12th and oat and barley varieties on the 13th. The seeding of the cereal nursery was about half completed.

Grasses have greened up noticeably during the week. Crested wheatgrass would now provide considerable pasturage.

A class in agriculture from the Dickinson State Teachers College visited the station on the 14th.

Maximum temperature, 71; minimum, 20; precipitation, .23 inch.

MANDAN:

Agronomy

The past week has been favorable for all field work. All plots for spring grains were prepared and wheat was seeded on the 15th, the same date as in 1931. The average date of seeding wheat is April 18.

The surface soil is dry, but moisture below the surface is good, and the wheat went into a moist seed bed. Russian thistles are coming up thick.

Winter wheat sown in stubble came through with a good stand. Winter rye is also in good condition.

Crested wheatgrass and bromegrass are getting a good start.

Arboriculture

All shelter-belt nursery fields have been double-disked, dragged and packed during the early part of the present month. Tree seed of Siberian pea-tree, boxelder, green ash, chokecherry, and buffaloberry, has been planted.

Two blocks of S. P. I. species of Fraxinus and Crataegus have been added to the species testing block series.

Mandan, continued:

Arboriculture, continued.

A number of trees of both deciduous and coniferous species have been planted as replacements in hedge, windbreak and other plantings on the station.

Hedges surrounding nursery fields have greatly delayed seeding this spring through the accumulation of snow which left the ends of fields very wet. About nine-tenths of each field became more or less dried out in the surface layers before it was possible to work the ends. This factor has a considerable influence on nursery stands as the majority of tree seeds require an abundance of moisture for germination. The hedges have also very severely competed with the tree seedlings the last three summers, no usable trees being grown at less than an approximate distance of 50 feet from the hedge. Hedges or trees around fields undoubtedly have a very beneficial influence in preventing snow being blown away during the winter months, and to a less extent soil blowing during the summer months. It would appear, however, very desirable to have fields between hedges of a larger size than four to eight acres.

Shipping of trees to shelter-belt cooperators commenced the first part of the present week. (April 11.) To date a total of 425 shipments, weighing over 10 tons, have been made. The stock came through the winter in excellent condition, no traces of 'damping off' occurring this year. In past years 'damping off' has resulted in a large number of trees being discarded through being badly infected. The tree stock is of excellent quality and of larger size than usual, which should greatly assist in establishing stands if moisture conditions are at all favorable. A few letters from the drought area in northwestern North Dakota have reached us stating there was practically no snow last winter and no rainfall so far this spring. The prospect of establishing tree plantings this year in such localities is not promising at the present time.

Horticulture

General routine work such as transplanting seedlings, potting up or bedding and vegetable plants in greenhouse and hotbeds, has been in progress the major part of the week. No vegetables have as yet been planted in the open.

Mandan, continued:

Horticulture, continued.

Mulch about perennials and shrubbery on the grounds and roses in the field, was removed a few days back. There is apparently much winter injury in the various rose hybrids and species. Everything is coming along very slowly so far this spring. Aside from lilacs and currants no buds have started to swell. Tulips are barely through the ground.

Pruning of orchards and small fruits has been completed. The trees were given a light thinning out and dead or broken branches removed.

Grapes, raspberries, and budded stock in the nursery have been uncovered. Mulch has been removed from seedbeds, young trees and strawberries.

Planting of trees, small fruits and cuttings has been in progress during most of the past week. The west coulee has been planted to small fruits including Juneberries, sandcherries, small sandcherry-plum hybrids, currants, gooseberries, grapes, raspberries and blackberries.

At the present time it appears that little winterkilling took place last winter. Even such tender varieties as Burbank plums and Golden Delicious apples came through the winter without apparent injury. However, continued dry weather in the spring sometimes seems to result in killing after this time.

Maximum temperature, 67; minimum, 23; precipitation, trace.

BELLE FOURCHE:

A beneficial rain of .41 inch was received April 3, which improved the moisture condition of the soil sufficiently to permit the germination of early seeded crops. Moderately warm weather prevailed after the rain, and high winds were of frequent occurrence. The surface soil dried very rapidly, particularly where the land was spring plowed, making conditions unfavorable to the satisfactory germination of shallow seeded crops, and to small grain seeded on plowed land. A rain of .26 inch on April 15 will aid the germination of seed in some instances, but good stands of crops seeded during the past week will not be obtained until after additional rain is received.

Belle Fourche, continued:

No available moisture is present in the soil below a depth of six inches, except in spots where the winter snow was retained in deep drifts, and the present dry-land crop prospects for 1932 are far from encouraging. Fall grain has shown a remarkable improvement since the rain on April 3. Winter wheat on fallow has made sufficient recovery so that reseeding to spring wheat will not be necessary, but the survival of winter wheat on continuously cropped land and on corn stubble ground still remains doubtful. Owing to lack of moisture, native pastures and hay crops have made no appreciable growth.

The various plots were disked or duckfooted, and harrowed in preparation for seeding spring wheat, barley, oats, peas, sweet clover, and bromegrass. Seeding of these crops was commenced April 9 and completed April 12.

Maximum temperature, 80 on the 14th; minimum, 25 on the 10th; precipitation, .67 inch.

ARDMORE:

The first two weeks of April were very favorable for field work. Only one shower heavy enough to delay seeding occurred, and this caused a delay of only one day.

During the first week in April all of the small grain in the rotations and varieties were planted. The soil was in excellent condition for seeding. All of the large fields were planted during the past week.

Soil moisture is ample for bringing up small grains, but there is very little water in reserve. Samples taken at wheat planting time showed that there is no available moisture below the first foot on land cropped last year.

Native grass is commencing to grow and is furnishing some pasture, particularly in locations where snow had drifted. Crested wheatgrass is far ahead of native grass and bromegrass. We expect to turn the steers into the 20-acre pasture next week.

The windy weather of March continued into April. The average velocity to date is about 8.5 miles per hour.

Maximum temperature, 82; minimum, 27; precipitation, .47 inch.

ARCHER:

During the week the weather has been warm and dry with freezing temperatures during most of the nights. The maximum temperature was 70 degrees and the minimum 19 degrees. A trace of precipitation occurred during April 9.

Winter wheat and winter rye have greened up considerably. The early prairie grasses have made some growth. The buds of the early leafing shrubs are breaking, showing the green folds of the new leaves.

Field work has progressed without interruption and consisted of finishing the plowing in the experimental field and the completion of other heavy tillage operations. The varieties of wheat, oats, and barley and the second dates-of-seeding have been seeded. The first date-of-seeding corn was made April 15. All trees around the farmstead have been cultivated and some miscellaneous plantings have been made.

Director W. L. Quayle visited the station April 15 and obtained the outline of the proposed vegetable garden project.

AKRON:

The first two weeks of April, with the exception of Thursday, April 14, were favorable for field work but too devoid of rainfall to affect any improvement in the agricultural outlook.

Current field work has been accomplished with a minimum of laborers and with a minimum of worry. All experimental early spring seedings were accomplished by the 12th.

Strangely enough, with the exception of Thursday, April 14, hard soil-blowing winds have not prevailed, which is extremely fortunate for the soil remains in excellent condition for blowing.

Spring grains seeded late in March and early April are emerging and prospects are bright for satisfactory stands, despite the dry condition of the soil at seeding time and the lack of rainfall since seeding.

Winter wheat has made very slow growth but now shows evidence of increased activity. Possibly in another week some estimate may be made of stands.

Akron, continued:

Thistles are emerging in myriads which does not promise good for any late-seeded crop. Wild brome is also much in evidence along fence rows and among the border tree plantings.

On Thursday, April 14, this region was visited by a southeast wind which by mid-afternoon had the air veritably filled with soil particles. This storm undoubtedly took its toll among struggling winter wheat fields in this region.

Junipers and Chinese elms were received from the railroad for filling-in the cooperative planting along the right-of-way. Seventy-six replants were set in the row of junipers, that included 200 plants last year, indicating a survival of 62 per cent, which is considered very good considering the condition in which the plantlets were set and the extremely dry season experienced last year.

Spiraea vanhouttei is beginning to leaf out.

Maximum temperature for the two weeks ending April 16, 80 on the 5th; minimum, 24 on the 10th; precipitation, .06 inch.

COLBY:

Since the snow and wind storm of April 9, the weather has been more pleasant than during any previous week this spring. It has been warm for the most part, with very little wind, except on the 14th and 16th when there was some soil blowing in this vicinity.

The spring small grains have all emerged to good stands this week. They were all slow in coming on account of the continued dry weather and soil drifting into the drill furrows. Winter wheat is beginning to make considerable growth. The stands of winter wheat are poor on many of the plots. Some of the wheat never did come up, some died in the fall, some winterkilled during the cold spell in March, and some died from the effects of wind and soil blowing. Soil samplings show an abundance of moisture on the fallow plots even in the subsoil. On all the other plots there is practically no moisture below 18 inches.

The inter-high-school livestock judging contest was held at the station this forenoon, April 16. About 150 boys and girls were in attendance.

Maximum temperature, 78; minimum, 23; precipitation, .17 inch in the form of rain and two inches of snow.

GARDEN CITY:

Spring plowing and early spring cultivation of plots was finished during the first week of April. Some cultivation was necessary to stop soil blowing. Spring-plowed fallow and spring-listed fallow plots had to be worked with a forkner or duck-foot cultivator to prevent blowing. Roadways were seeded to wheat in order to hold soil from washing and blowing.

All plot trimming has been finished on winter wheat. Hauling of dirt into low places on roadways and general cleaning up has occupied part of spare time not devoted to cultivation practices.

Three winter wheat plots had to be seeded to spring barley. The stand of wheat was too thin to leave. Spring grains are up to good stands. Soil moisture under wheat plots is rather low. All winter wheat needs rain. Growth is very slow except on fallow and fallow plots are not producing the normal growth for this season of the year.

Maximum temperature since April 1, 91; minimum, 23; precipitation, .20 inch.

HAYS:

Barley, oats, spring wheat, and bromegrass plots were seeded April 1, and Canada field peas were seeded April 2. Barley, oats and spring wheat are up to a good stand on fallow, fall-plowed ground, and disked kafir stubble and corn stubble ground. The stand is streaked on listed ground and thin on spring-plowed ground, but more is coming so eventually a full stand may be obtained. Canada field peas coming up nicely but not yet up to a full stand.

Winter wheat is making rapid growth. On fallow it now almost covers the ground and is six inches high. On early fall plowing it is also making good growth but not nearly as heavy as on fallow. On early fall listing, oneweying and disking (wheat stubble land) the stand is a little thicker and about the same amount of growth as on early fall plowing, but is now taking on a lighter green color, whereas the wheat on early plowing and fallow is of a dark green color. There was a trace of winterkilling on the early fall plowing and considerable more on the late plowing. There was practically no loss by winterkilling on listed, oneweyed, or disked wheat stubble land. Wheat on late plowed ground is poorer than wheat on any of the early-prepared plots. Late disked ground shows a very poor, stunted, light-colored growth and continuous stubbled-in wheat is still poorer than the late disked. Stubbled-in wheat on ground plowed for last year's crop is much better than continuously

Hays, continued:

stubbled-in and better than wheat stubbled-in on ground fallowed for the previous crop, as on this ground the stubble was so thick and heavy it seems to have smothered out the wheat. Unlike most other years, there is practically no volunteer on plots where the ground was fallowed for last year's crop.

Corn stubble and kafir stubble wheat looks very promising though not quite as heavy growth as on early fall plowing. Wheat drilled in corn and kafir stalks has looked as good as any, but in kafir stalk ground is now just beginning to lag in growth and beginning to lose its dark green color - a normal behavior for wheat drilled in kafir stalks.

Work during the past two weeks has consisted in rushing the tillage work, none of which could be done until the last few days of March on account of wet soil. Plowing for all row crops has been finished. All winter wheat plots have been trimmed. During the last week soil samples for moisture determinations have been collected on a large number of wheat plots representing all methods of seed-bed preparation, and a few samples have been collected on oats and barley plots and on fallow. Soil samples for nitrate determinations were collected on a series of seed-bed preparation plots for wheat and were shipped to Manhattan where the nitrate determinations were made.

TUCUMCARI:

Warm weather has caused trees and grass to green rapidly, although precipitation is far below normal and only 0.35 inch has been received since February 20. Wheat in the plains portion of the county looked remarkably good until ten days ago, but is rapidly deteriorating. Wheat and rye on fallow, on the station, appear uninjured; some damage is noticeable on early plowed plots; while on the A plots, late plowed, many plants are dying.

Field work was begun this week with the listing of the north field rotation plots and listed methods with milo. Aside from the top two inches of soil there was considerable moisture. Other work included repairing of water tower, completion of orchard and hauling brush, pruning other trees, and planting trees. Vacancies in the contour plantings have been filled with exception of evergreen rows. Planting of small evergreens has been delayed until moisture is received, for it is felt these plants are in condition in nursery rows or heeled-in than planted under present adverse climatic conditions.

Tucumcari, continued:

Peach buds were killed by cold weather in early March, but it appears apples, pears and cherries still are unharmed and all carry fair amount of blooms.

Maximum temperature, 86; minimum, 28; precipitation, none; precipitation, for the month, .08 inch, for 1932 to date, 1.57 inches; evaporation, 1.580 inches.

DALHART:

The weather continues dry and unfavorable for spring growth. All soil, with the exception of land summer tilled last year, is almost completely dried out. The high winds of this spring have dried out what little winter moisture was received. The wind damage to the small wheat plants has been severe. Soil blowing has also been a problem all spring. The worst day for soil blowing, if it is possible to say that one day was worse than several others, was on April 9. The most severe damage on the station by this wind was to some young conifers which had just been set out. Winter wheat and rye, except on fallow, can almost be considered failures at this time. Oats are very good, considering the type of the spring. Barley is only fair. Winter wheat varieties, which are on fallow, show some drought injury but are very good for the year.

This week saw the completion of the conifer planting. About one-half of the 2600 planted were planted before the 9th and were badly damaged.

Lilacs, caragana, redbud, and cherries are in full bloom. The early trees are starting to leaf out.

Maximum temperature, 83; minimum, 23; precipitation, none; wind velocity, 4.9 miles per hour; evaporation, 1.534 inches.

BIG SPRING:

Weather conditions during the past two weeks have been unusually warm and dry. April 15 was the first cloudy day of the month, but out of several light sprinkles on this date only .10 inch of rain was received. Although subsoil moisture is ample at present, a good rain is needed to start grass in pastures. Livestock are now subsisting mainly on wild rye and winter weeds.

Big Spring, continued:

Many farmers are starting to plant feed and cotton crops and some report that they have obtained good stands. Their problem now is to keep sandstorms from covering it up. Station planting thus far has consisted of a plot each of Rowden, Mebane, and Half & Half cotton varieties. Considerable time during the past two weeks was devoted to planting an evergreen species, spacing experiment. The present planting consists of 2166 trees divided up as follows: 464 Red cedar; 464 Austrian pine; 342 arborvitae; 448 Scotch pine; and 448 Pondorosa pines. All species were planted in solid blocks with a 6' x 12' spacing. These will be thinned to different spacings when definite stands have been obtained. Other work has consisted of threshing and grinding milo for the feeding experiments.

Maximum temperature, 93; minimum, 30; precipitation, none.

LAMTON:

Moisture conditions remain unimproved and uniform germination of spring crops planted at this time appears unlikely. A good supply of subsoil moisture exists on uncropped land, but the surface dries rapidly after plowing or any other form of necessary tillage.

A shower of 0.33 inch on April 9 was followed by one day of cloudy skies and a north wind of high velocity. In spite of the high wind, it was possible to prepare seed beds on some spring-plowed plots for corn and sweet clover.

Spring plowing that was done during the week for sorghum experiments and on the rotation plots was immediately disked and harrowed and in some instances the cultipacker was used advantageously.

Corn in the rotation plots and in a small variety test was planted April 11. Sweet clover in Rotations 133 and 134 and alfalfa in Rotation 142 were planted in paired rows April 11. Seeding of sweet clover in a fertilizer project and alfalfa in an increase field will have to be delayed until moisture conditions are improved.

The first planting of cotton in the date of seeding tests was made April 14 and the first planting of about 85 varieties, strains, and hybrids of grain sorghums in the chinch-bug-resistance project was made on the 14th and 15.

Lawton, continued:

Wheat averages 10 to 15 inches in height on the rotation plots. Although the plants present a rich dark green color on well-tilled seed beds, there is slight evidence of the need of rain. Wheat on continuously cropped, disked stubble shows very poor development. In the wheat variety test, growth ranges from 15 to 24 inches in height and the earliest maturing varieties are booting.

Winter oats stooled heavily after the late spring freeze and growth is quite vigorous. Stands, however, are too thin to permit satisfactory yields.

Winter barley is heading quite low and growth is very uneven.

Soil cracks in the alleys bordering these small grain plots are about 15 inches deep.

Native grass has made a very limited spring growth and affords but little grazing now. Trees and ornamentals are now pretty well leafed out for the second time this year, and some bloom is present on such shrubs as spiraea.

Precipitation for April to date is, .33 inch, and the total since February 20 is, .54 inch. The minimum temperatures from April 1 to 15 varied from 34 to 61, and the maximum from 51 to 86. The wind velocity during the same period ranged from 0.7 to 16 miles per hour.

WOODWARD:

April 16 rounds up the planting of trees and shrubbery and the shipment of the last cooperative windbreak material.

Plantings on the station have consisted largely of the replacing of Chinese elms and arborvitaes destroyed by late spring freezes in the springs of 1931 and 1932.

Chinese arborvitaes have been accepted as the foundation of most ornamental plantings from central Kansas southward. They have also been depended on as the fastest growing, most easily transplanted evergreen windbreak material. The extremely low temperatures the last of March, 1931, killed most of the more compact ornamental varieties of Chinese arborvitaes.

Woodward, continued:

The taller, more open types were injured, but not killed. Low temperatures during March, 1932, after an unusually warm winter, killed many young arborvitaes planted in 1931. So it seems that a species of tree which, whatever its faults, has proven most reliable for 25 years suddenly in two successive years kills out. The loss of confidence in it by the public is emphatic. The tendency is now all for junipers.

The Chinese elm was badly injured in the spring of 1931 by late freezes and in the fall of 1931 by a sleet storm before it shed its leaves. In the spring of 1932 much of last year's growth was killed by March freezes after blooming. So the value of the Chinese elm, which has been such a craze for several years, has suddenly become very questionable.

It is not likely that great injury to wheat resulted from late freezes in northwest Oklahoma. Wheat is, however, heavily stooled and made a rank growth the fore part of the winter and the possible yield may be appreciably lowered if rains do not occur soon.

Apples and some of the late-blooming plums and cherries are now in bloom. All peach buds were killed by March freezes.

Station work the past two weeks has consisted of planting trees and shrubs, hauling brush, disking orchard, vineyard and nursery, and cleaning up grounds generally. Also, considerable field cultivation was accomplished and roads were repaired and terraces built. Artichokes were harvested and varietal plantings of corn and clover were made.

Maximum temperature for the first half of April, 86; minimum, 31; precipitation, .37 inch, in three showers.

PENDLETON:

An unusual amount of precipitation occurred during March, the total precipitation for the month was 3.41 inches. This precipitation occurred on twenty-one days during the month. On account of wet weather it was impossible to do any seeding in March.

The weather the first part of April was very favorable for both field work and crops. The weather for the most part has been cool with only a few windy days.

All the field work in this section is at least one month late on account of frequent rains during March. The station seeding operations were completed on April 14. A few farmers still have some seeding left to be done. In normal seasons the spring seeding is usually completed by March 15. The rotation wheat, oats and barley are now emerging, with indications of good stands.

The station buildings have received a coat of paint in the past two weeks; they make a very presentable appearance. Just as the painters had finished the residence a "duststorm" came up and blew for about three hours and was then followed by a shower of rain. The fresh paint on the house had grass cuttings, leaves, stubble cinders, and dust imbedded in the fresh paint.

Chinese elm trees are beginning to leaf out. Many of the Arborvitae were severely injured by cold weather last winter. The Douglas Fir adjoining the Black Locusts also show considerable winter injury.
Maximum temperature during April, 82; minimum, 25.

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REPORT FOR THE WEEK ENDING APRIL 23, 1932.

HAVRE:

With the exception of high winds on Saturday night, April 16, and Sunday, the 17th, the past week was quite favorable. Field work was in progress the first three days but was delayed the last three days on account of storms. Rain began falling Wednesday night. Showers, fog and cloudiness have continued since that time. The total rainfall for the past three days was .85 inch. A shower amounting to .05 inch was recorded last Sunday.

In the prairie provinces of Canada to the north there was a severe snow storm with strong east winds. Our storms here are usually accompanied by north and east winds but during the past week the winds have been almost continually in the south and west.

Native grass has made a very good start and is at least two weeks ahead of the usual year. Crested wheatgrass is growing rapidly. Winter wheat stands are spotted and several plots on the rotations will be reseeded. Some of the date of seeding show very good stands. Early seedings of small grains are up. Some miscellaneous seeding was completed the first of the week including a part of the nursery work. The main rotation plots will be seeded as soon as weather permits. Commercial fields are also being seeded.

Maximum temperature, 73; minimum, 33; precipitation, .90 inch.

JUDITH BASIN:

The weather during the week has been cool and cloudy with a light rain of .46 inch on April 21.

Winter wheat, grass, alfalfa, rye, and sweet clover have made a good growth to date. Seeding of spring wheat, oats, barley, flax and field peas has been completed on the rotations.

Other work during the week has consisted of setting out trees, building fence and the cultivation of alfalfa fields with the duckfoot cultivator. Army cutworms are beginning to make their appearance but are not yet as numerous as a year ago. Fields which have been stubbled-in for two or more years seem to have the heaviest infestation.

Judith Basin, continued:

Recent visitors at the station included Director Linfield and Professor Louis Vinke, of the Montana Experiment Station.

Maximum temperature, 71; minimum, 29; precipitation, .46 inch.

SHERIDAN:

Temperatures continued high for the season throughout the week. Wind movement was considerably above the station average for the first five days of the week and there was some blowing on the lighter soil of the station. The last three days were cloudy with a few light showers, but with no rain of consequence. The rain was heavier at Sheridan and beyond toward the mountains. Rain stopped field work at noon to-day, April 23, and continues this afternoon.

The remainder of the early spring seedings on the station, including varieties of barley and field peas, alfalfa, perennial grasses, and sweet clover, were completed early in the week. The greater part of about 14 acres in field 'O', south of the highway, was broken up from sod to use for feed crops, and a part of it was worked down. The most of the nursery stock received from Mandan for replacements in the shelter belts was planted. Heavy damage to boxelder planted last year on account of borers was found. Some damage of young stock by rabbits was also found.

Winter wheat and rye, alfalfa, and grasses made a good growth during the week. The soil dried fast by the heavy winds, however. Nearly all seedings of grain of the week of April 9 emerged during the week. Sheep were weighed and put on the pastures.

Maximum temperature, 79; minimum, 31; precipitation, .19 inch.

DICKINSON:

Warm weather with three light showers during the week have provided good growing conditions.

Wheat, oats and barley, seeded on the rotations April 8 to 11, are emerging with excellent stands. Grasses have grown rapidly since the showers. Trees and shrubbery are too far along for this date in view of the fact that a hard freeze killed all blooms last year on May 21.

Dickinson, continued:

hardy varieties of vegetables were planted in the garden on April 22. Most of these same varieties planted on April 11 have emerged.

An increase block of alfalfa which has become thin was plowed and will be reseeded.

Maximum temperature, 69; minimum, 39; precipitation, .38 inch.
April precipitation to date totals, .67 inch.

MANDAN:

Agronomy

Field work was delayed early in the week because of rain. Barley was seeded in the rotations on April 19, and oats on April 20. Peas, sweet clover, and bromegrass have also been seeded. Oats were seeded on 15 acres in field P for feed.

Rainfall so far this month has been light.

Crested wheatgrass and bromegrass are making excellent growth.

Horticulture

A light rain in the early part of the week put the ground in good condition for planting strawberries and small fruits. Planting in the nursery and fields is now almost completed. Cuttings have been planted in the seed beds.

Buds are now swelling and a few apricot crosses have started to bloom. It appears that there will be a heavy bloom on most fruit trees. There is as yet very little evidence of winter injury, even in the case of varieties not usually considered hardy.

Other work included potting fruit trees for breeding purposes, top-working apple trees, and hauling brush. Weeds are starting to grow and the first cultivation should start soon. It is also time to spray the trees.

Mandan, continued:

Horticulture, continued.

The first planting of vegetables in the Acre-garden test, including Alaska peas, onions, parsnips, carrots, and potatoes, was done April 19. Spinach, radishes, beets, onion sets and horseradish, were also planted in the Coulee garden at the same time.

Transplanting of tomatoes for the breeding project was completed the 22nd. About 4,000 plants are to be used in this project.

Growth is now fairly well along in nearly everything. Trees and shrubbery are budding, lawns greening up, perennials peeping through the soil.

Arboriculture

Shipping of shelter-belt tree stock has continued during the week. All hardwood shipments have been completed and a large majority of the conifer shipments. All evergreen stock is in very poor condition due to bud and needle damage. The needles are turning 'bronze color', or the terminal buds appear dead. The entire lot of Black Hills and Colorado Blue spruce are injured so badly that it has been decided to discard them. A few rows have been left in the field of each species to determine if recovery can be made. From available literature on this subject the injury appears to have been caused by the hot weather during the month of February, the transpiration stream from the tops being greater than the frozen roots could take care of. Mulching of the trees would probably have tended to prevent or lessen this injury.

Letters are being received from cooperators indicating they are well pleased with the hardwood trees received this spring.

Maximum temperature, 74; minimum, 41; precipitation, .89 inch.

BELLE FOURCHE:

Warm, unsettled, windy weather has prevailed throughout most of the week. The nights have been abnormally warm, the minimum temperatures for the past four nights ranging from 46 to 59 degrees. A strong southeast wind has blown steadily during the last half of the week, but the evaporation has not been excessive, owing to the humidity being abnormally high. Light showers were of frequent occurrence. Precipitation was recorded on five days, but the amount received was not sufficient to be of material benefit to plant growth, although a rain of .25 inch

Belle Fourche, continued:

on April 22 will probably improve the germination of some of the shallow-seeded crops. The sky continues to be overcast and the prospect of additiond rain is very promising.

Spring wheat and barley are up with at least 75 per-cent stands on all cultural treatments except spring plowing. Satisfactory stands appearently will not be obtained on spring plowing until after a good rain is received. Oats are coming up, and field peas and sweet clover are beginning to emerge. Alfalfa on the dry-land rotations has completely killed out, and all plots will have to be reseeded.

Russian thistles are much more numerous this spring than in any recent year, and have made such an extraordinarily vigorous growth that cultivation of all plots to be cropped to corn, sorgo, flax, and alfalfa was necessary during the week. Duckfoot fallow was given the first cultivation.

Maximum temperature, 80; minimum, 33; precipitation, .35 inch.

ARDMORE:

The wind velocity continued high during the whole week. On April 22 a very high southeast wind blew during the whole day. Soil blowing took place on many fields in the neighborhood. Some of the planted fields on the station blew a little, but not enough to do any damage. This is the first time noted at this station when a southeast wind was strong enough to cause soil movement.

The first good rain in over a year occurred the evening of April 22, when .81 inch fell. The sky is still overcast to-day, 23rd, and most of the moisture should go into the soil.

Field work during the week consisted of seeding alfalfa, crested wheatgrass, and sweet clover in fields, and in plowing fields and plots for corn. All but six of the corn plots had been plowed when the rain stopped field work.

All spring grains except flax have emerged. Stands are good on all except the spring plowed plots.

Ardmore, continued:

Winter grains have made seasonable progress, and all but a few plots have a fair stand. A few of the plots on fallow have had their stand greatly reduced by soil blowing.

The steers were weighed on April 21. The outside lot of steers made good gains and are now in as good condition as the steers in the regular lots. They received no supplementary feed during the period. The fourteen steers in the outside lot were turned in the 20-acre crested wheatgrass pasture on April 21. The grass in this pasture was about five inches in height.

Maximum temperature, 81; minimum, 32; precipitation, .82 inch.

ARCHER:

The weather has continued dry and warm until to-day. A severe spring blizzard is now in progress. The outstanding feature of the weather was three days of haze and strong southeast wind. On April 20 the haze began to appear, on April 21 the wind became stronger, the haze deepened and showed a heavy load of dust, and on April 22 the wind increased to a severe gale and the air became exceedingly clouded with dust. During the early afternoon the dust was so heavy that it gave the feeling of approaching dusk. Automobile head lights were used by many motorists during the afternoon.

Plant growth has progressed but is in need of moisture. The leaves of the early-leafing shrubs have opened and the prairies show a tinge of green. The winter grains and perennial crops are in need of moisture. The germination of spring-seeded crops is slow and irregular due to the dryness of the soil.

Work at the station has consisted of staking and seeding the wheat, oats, barley, and peas in the rotation plots and the seeding of various increase plots of these crops in the experimental field. Preparation for the planting of trees is in progress and the revamping of the roadway on the south side of the farmstead is under way.

Maximum temperature, 75; minimum, 29; precipitation, .04 inch.

NORTH PLATTE:

Following four days of destructive southeast wind, intermittent showers to-day, April 25, totaled .51 inch at the buildings and .65 inch on the table. This is the first precipitation of as much as one-half inch in any one day since June, 1931.

Spring grains emerged with good stands April 10 to 18. Growth has been fair in spite of continual punishment by high winds. All winter wheat plots not previously reseeded with winter wheat early in March were reseeded with Ceres spring wheat on April 6.

The annual Smith-Hughes High School judging contests were held here April 21-22. There were seventeen schools represented with a total enrollment of 193 boys. Dr. A. G. Crane, President of the Wyoming University, was the banquet speaker.

COLBY:

Scant April showers have alternated with high winds and dust this week. During the last three days the day temperatures have been very high. This together with the high winds has resulted in heavy evaporation. Considerable soil blowing was in evidence on these days also. Last night, April 22, the wind was accompanied by intermittent showers. Early this morning it was showery with almost no wind. Since before noon a hard wind has been blowing from the east, and it is getting cold.

All crops have made excellent growth during the warm weather. Where still alive winter wheat is greening up, and the spring grains are growing rapidly. The pastures, too, are green. Fruit trees are blooming more abundantly than expected. Only a few apricot blooms escaped the early freezes, but many of the peach trees and most of the plum, cherry, and apple trees are blooming profusely.

The spring plowing for corn, beans and the sorghums was done this week. The preliminary tillage in the methods of fallow series was done on the 21st. Some of the plots were very hard on the surface but all were moist to wet at the depth of tillage so that the soil turned up mellow.

Maximum temperature, 88; minimum, 35; precipitation, .34 inch.

GARDEN CITY:

The past week has been very windy and quite warm. For three days and nights the average wind velocity has been 20.1 miles per hour. Wheat is making rapid growth. Soil moisture samples taken on the 22nd showed sub-soil moisture on wheat land to be quite variable.

Continuous cropped land had very little available moisture below the second foot. Fallow land had a good supply of moisture for the entire six-foot zone.

Early spring weed growth is just starting. Spring fallows will be broken in the next week or ten days. Cultivation of fall-listed fallow plots was done the past week. Some volunteer wheat had become so big it was not advisable to wait until weed growth had started.

Maximum temperature, 84; minimum, 40; precipitation, .60 inch

HAYS:

With the rain, which occurred the first part of the week, and generally warm weather, conditions have been ideal for plant growth. All spring small grains are looking fine and winter wheat continues making good growth. The difference between the amount of growth on the various methods of seed-bed preparation remains much the same as stated in last week's report and is normal. Before the rain the rye had just began to show need of moisture. Canada Field Peas are looking fine.

The rain fell slowly so that all of it went into the ground making it too wet for any tillage work until the 22nd. Soil moisture samples taken just before the rains indicate generally a good supply of moisture to the depth of two feet. Below two feet it is very spotted. Fallow is well supplied to the depth of six feet.

Maximum temperature, 85; minimum, 41; precipitation, 1.11 inches.

TUCUMCARI:

The worst wind of the year is blowing to-day, April 23, after averaging over 20 miles per hour last night on the two-foot anemometer. Mileage shown from eight to eleven this morning is 94, or slightly over 31 miles per hour average since the morning reading. The air is dust-filled and there is no way of determining at present just what damage to fields is occurring.

Tucumcari, continued:

Work of the week included spraying orchard, stalk cutting and listing considerable plot and increase land, overhauling tractor, watering recently-planted trees, and planting of first date cotton and of corn for borer study.

Wheat on the plains portion of the county is fast deteriorating. This crop on sod land is in most cases very seriously damaged, or even killed, while on old land it is somewhat better.

Practically no evergreens have been planted on the station this spring, for precipitation is far below normal. Young conifers in nursery rows are growing well and it will perhaps be advisable to delay transplanting until late summer, after young growth hardens. Evergreens planted a year ago showed excellent survival last fall, but the adverse conditions of the past few months have caused high mortality.

Maximum temperature, 86; minimum, 37; precipitation, .25 inch, making a total of 1.82 inches for the year, and 0.60 inch the past nine weeks. Evaporation, 2.139 inches; wind velocity, 7.2 miles per hour.

DALHART:

The unfavorable spring conditions continued during the past week. Rather mild temperatures were the rule. Three showers gave a total of .23 inch of precipitation. Frequent sand storms continued to damage the wheat. The surface soil is now practically dried out and is either 'ashy' or hard. The later condition prevails where it is necessary to plow under a cover crop and the former, 'ashy', condition exists where it has been necessary to strip cultivate to check soil blowing.

Strip cultivation to prevent soil blowing has again been done during the week. It was almost impossible to reach moist soil with the shovels. Rye, which was used for a cover crop, was likewise strip cultivated to tear it out, as the soil was too hard to plow.

Spiraea Vanhoutte is in full bloom. Cherry trees had one of the shortest blooming periods ever noticed here this spring. They burst into full bloom almost in one day and the petals had fallen by the third day. A few of the early iris are blooming. The grapes are sending out new growth, which is about ten days early. They would be damaged by freezing temperatures which are very likely at this time of the year.

Maximum temperature, 86; minimum, 39; precipitation, .23 inch; Average wind velocity, 7.0 miles per hour; evaporation, 2.032 inches.

BIG SPRING:

The first rain of more than one-tenth of an inch since the latter part of February was received the night of April 22. At this time .54 inch was received in a very short time. This packed the soil to such an extent that it was left in good shape for blowing. To-day, April 23, the wind is taking advantage of that condition with the result that considerable soil is moving about.

It is probable that this rain will start a large amount of planting during the coming week in this section although the soil is still very cold.

Station work has consisted of lister cultivating an increase field in preparation for planting and repairing a terrace along the north side of the rotation field to prevent washing of the plots. Other work has consisted of watering trees, and hauling feed for the cattle.

Maximum temperature, 93; minimum, 47; precipitation, .54 inch.

LAWTON:

A week of more or less cloudy, threatening weather provided a shower of .09 inch on the 17th, another amounting to .14 inch on the 18th, and one of .36 inch on the 22nd. During this period, local rains of one inch or more were reported within the county. A high wind velocity followed each period of rainfall and the benefit derived therefrom was temporary. The maximum temperature for the week was 85 degrees and the minimum was 50 degrees.

Corn planted April 11 emerged to good stands by the 20th. Alfalfa in Rotation 142 and sweet clover in Rotations 133 and 134, planted in paired rows April 11, are emerging with a fair degree of success. Eight varieties of cotton planted April 14 were emerging rather irregularly on the 22nd to the 24th, and fairly good stands appear probable. Good stands were secured on practically all of the grain sorghums planted on the 14th and 15th.

Alfalfa grows slowly and does not promise a very heavy cutting of hay unless considerable rain is received in the near future. Two year old sweet clover has made rapid growth within the past 10 days. The commercial fertilizer sweet clover project was reseeded April 23.

Lawton, continued:

The winter barley varieties, Tenn. 66, Hanriver, Pidor, and Wisconsin 519 were fully headed April 22, and the first heads in Michigan and Orel were recorded April 19. In the wheat variety test Nebr. 28 and Early Blackhull were fully headed April 24, and the first heads in Prelude X Kanred 8886 and Kanred X Hard Federation were recorded April 21. Heads in a good many other varieties will emerge from the boot within a very few days. The first heads on several of the winter oats varieties were also showing April 18 to 22.

Seed beds for spring planting of row crops are now in excellent condition, but climatic conditions are very favorable to rapid depletion of surface moisture.

WOODWARD:

There has been wonderful growing weather over the past week. Precipitation has occurred, as follows: 17th, .02; 18th, 1.13; and 22nd, .55 inch. Trees have come into full leaf almost over night. Wheat has responded more slowly; owing to moderate moisture during the spring it has lost the rank leafiness of early winter and should be in a condition to utilize rainfall for grain production.

Purchase of sorghum seed at the station seems to be somewhat slower than usual this spring. It is probable that farmers are using seed they have on hand rather than spending money for new seed.

Alfilaria introduced on this station three years ago keeps spreading and is making a fine showing this spring. This is a pasture plant of value grown largely in parts of the Southwest where there is very little frost. It has been assumed that it would not be hardy as far north as Woodward.

Work of the week has consisted of sodding-down ditches and runways with Bermuda grass, grafting a grove of native black walnuts with selected varieties, planting alfalfa, putting in culverts, cultivating for blowing, and disking to exterminate weeds.

Maximum temperature, 82; minimum, 47; precipitation, 1.70 inches.

PENDLETON:

The station work the past week has consisted chiefly of plowing and weeding fence rows.

An underground gasoline storage tank and pump were installed this week. Heretofore gasoline has been stored in iron barrels above ground.

The see-pea acreage in this county will be considerably less than last year. The farmers are unable to obtain satisfactory contracts.

The weather has been cool and the sky mostly cloudy for the past week. Growth of all plants has been very slow. Federation wheat, which normally starts to head about May 15, will not head until about June 10.

Maximum temperature, 62; minimum, 26; precipitation, .71 inch; precipitation for April to date, 1.78 inches.

AKRON:

The fore part of the week was favorable for field work and good progress was made. The rotation corn plots, the stubble land for the rate and spacing corn project, and the stubble for fallow for cereal variety experiments, were plowed and packed. The early plowing serves as a means of eliminating volunteer winter wheat from areas where snow had laid during the winter. Other work was the cultivating and the hoeing of wild bromegrass from the shrubbery and hedge-row plantings.

Hard driving winds from the southeast prevailed on Thursday and Friday, April 21 and 22, filling the air with dense clouds of dust that made it extremely difficult and uncomfortable to work outside. It is raining to-day, April 23, the rain coming as a slow drizzle impelled by a mild northeast wind.

Maximum temperature, 82; minimum, 32; precipitation, .41 inch.

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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 30 1932

Not for publication without
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REPORT FOR THE WEEK ENDING APRIL 30, 1932.

HAVRE:

Weather during the past week was cool and cloudy with precipitation recorded on five days. Temperatures were too low for very rapid growth but grasses both domestic and native are making some progress. Prospects are very bright for a heavy growth of native grasses.

Temperature dropped to 25 on the 26th. This apparently did a little damage to the crops that were just emerging. Russian thistles are starting rapidly but the freeze did not injure them.

Field work was possible on Tuesday afternoon, Wednesday, and Thursday, April 26, 27 and 28. While the rainfall has not been heavy it has been cloudy and damp, making the surface too wet for field work.

Early seedings of small grains are up nicely. Varieties and some miscellaneous seedings were made during the week. The rotations are all ready for seeding.

Sam Sloan, Extension Agronomist, Montana Extension Service, was a station visitor on the 28th.

Maximum temperature for the week, 54 on the 23rd; minimum, 25 on the 26th; precipitation, .56 inch; total precipitation for April to date, 1.71 inches.

JUDITH BASIN:

The weather has continued cold and cloudy with intermittent rain and snow during the greater part of the week. Field work was possible during only two days of the week. Some additional seeding was completed and about all that remains now is the seeding of grasses, alfalfa and sweet clover on the forage project. The low temperatures have kept growth of all crops at a minimum but with a few days of warm weather they should make rapid progress. A hard freeze on April 25 froze the ground to a depth of about three inches but as far as can be determined no damage was done.

Maximum temperature for the week, 53; minimum, 19; precipitation, .48 inch.

HUNTLEY: (Report for the week ending April 23, 1932.)

The past week has been too cool for good growing weather and winter wheat and rye have made but little progress. Spring sown crops are beginning to appear on the warmer soils but as yet the stands are very thin. Weeds and volunteer grain have come up thickly on much of the stubble land and all areas not in the tillage experiments, but which are to be maintained in fallow this year were cultivated with the duckfoot.

A start was made on the plowing for corn and other late crops. The land is in excellent condition for this work at present.

Maximum temperature for the week, 76; minimum, 26; precipitation, .22 inch.

HUNTLEY:

Above normal rainfall throughout the week has been of immense benefit to farmers and livestock men. One rain extending over a period of 48 hours during the last week-end totaled 1.10 inches, and a second shower during the last two days amounted to .55 inch. Precipitation was recorded every day of the week but one and reached the total of 1.78 inches. The normal for April is 1.25 inches.

Winter grains, alfalfa, and grasses have made some advance during the week but cold weather has retarded spring sown crops. Army cutworm injury to winter wheat has been reported by farmers in neighboring localities. A survey of the plots on the station has revealed but few cutworms of the Army variety, although numerous pale western cutworms in various stages of development were found.

Maximum temperature for the week, 58; minimum, 25; precipitation, 1.78 inches.

SHERIDAN:

The rain starting about noon of the 23rd continued until the next morning, bringing the heaviest precipitation for a 24-hour period since April, 1925 at this station. Unsettled weather with showers continued over the remainder of the week, the last precipitation being in the form of snow on the 28th. Very little field work was possible during the week. Land in Field F was prepared for seeding alfalfa for feed, but the ground has been too wet since to seed. Plowing of sod in Field C, south of the highway, is being completed to-day, April 30, to make 15 acres of cultivated land in that field. This field also was fenced along the highway.

Sheridan, continued:

Temperatures were much below the average throughout the week, and wind movement was high for this section. Soil samples taken at random this morning showed moisture to a depth of about 30 inches on stubble land.

Planting of shelter-belt stock received from Mandan some time ago was completed. A large part of the conifers received the first of this week was planted and planting of the remainder may be completed to-day. Wheat and barley in the rotations have emerged. There was practically no growth of most vegetation during the week.

Maximum temperature for the week, 47; minimum, 22; precipitation, 2.98 inches.

DICKINSON:

Weather during much of the week was cloudy with rain recorded on six days. Temperatures were about 15 degrees lower than the previous week. On the morning of the 26th a temperature of 17 degrees was recorded.

Oats and barley which were killed back by the frost are alive under the ground, and will probably recover but need warmer weather to do so. Some damage was done to other tender vegetation. Alfalfa and grasses were injured very little, if any, by the freeze.

Fruit buds apparently were not killed, and if conditions are favorable, the outlook is for an unusual amount of bloom on plum and apple.

Very little field work was possible. Increase blocks of Hannchen barley and K-132 wheat were seeded. Potatoes were planted in the garden. Six varieties of evergreen seedlings were received and planted.

J. M. Stephens visited the station on the 26th.

Maximum temperature for the week, 67; minimum, 17; precipitation, 1.20 inches; precipitation January 1 to April 30, 3.69 inches; surplus, .82 inch.

MANDAN:

Agronomy

Field work was possible on only 2⅔ days during the past week because of frequent light rains.

Heavy freezes occurred on two nights when the temperature dropped to 19 degrees, and to 23 degrees. Wheat which was just nicely up was damaged to a minor extent. There seems to have been a number of young Russian thistles killed by the frost.

Wheat was up about a week sooner than in 1931.

Rain and snow fell on the 25th. The snow was wet and heavy and melted nearly as fast as it fell. The precipitation for April totaled 1.99 inches as compared with the normal of 1.61 inches.

Yields of corn grown for silage production at this station were reported in the March newsletter. Some of the yields as originally reported were in error. The following table shows the correct yields.

Yields of corn varieties grown for silage for the nine years from 1923 to 1931, inclusive.

Variety	Pounds green or Silage weight	Pounds air-dried	Bushels of ear corn air-dried.
Northwestern dent	9,366	4,038	30.0
Falconer	8,959	3,950	30.9
Payne	10,274	4,225	29.9
Minn. 13	9,779	3,909	25.9
Mercer	11,388	4,421	26.6
Rainbow	14,158	4,885	32.8

The ear-corn yields are taken from the variety trials. They serve as an index of grain production.

Horticulture

Continued showers have been favorable for trees and small fruits planted this spring. However, such showers have made it necessary to postpone the first spraying of fruit trees, and if postponed much longer, this spring dormant spray may be omitted this year.

Mandan, continued:

Horticulture, continued.

Potatoes were cut on April 28 and 29, and will be planted early next week, the weather permitting. The usual variety test, spacing experiment, and tuber selection work will be continued.

But little winter injury appears to have taken place and most fruit trees will bloom profusely. There will probably be a heavy set of fruit if damaging spring frosts do not occur.

Considerable planting of trees and shrubs on the station grounds has been in progress during the week. A mixed border planting in the rear of the Superintendent's and Horticulturist's residences was completed Friday, April 29. All of the material used had been grown on the station, a large part of it consisting of S. P. I. material grown from seed. Two new hedges of material from the same source were planted in the hedge test project. Roses were pruned the early part of the week. A large number of hybrid rugosas were killed to within six inches from the ground. Protection given was as usual, hilling up about the base with soil and applying mulch of hay on top to a depth of 18 inches.

Asparagus and rhubarb just starting to grow were killed back to the ground. It is a little early to say whether lilacs and other early flowering shrubs were ruined for the season, but as they are distinctly backward in growth so far, it seems likely they were not hurt.

Maximum temperature for the week, 59; minimum, 19; precipitation, .85 inch.

BELLE FOURCHE:

The early spring drought was definitely terminated during the week by the first substantial rains to be received in over two years. Precipitation has been recorded every day except one, the daily amounts ranging from a trace to 1.27 inches. A total precipitation of 2.49 inches has been received since the rains commenced April 22, and only a comparatively small amount of run-off has occurred. The rain was general throughout Western South Dakota, and was much heavier in some localities than at Newell, 4.35 inches precipitation being recorded at Belle Fourche, 26 miles west of the station. A total of 3.16 inches has been received from April 1 to April 29, inclusive, which is next to the largest amount for the month of April on record at this station.

Belle Fourche, continued:

The weather has been unusually cold, and crops have made practically no growth. A severe frost occurred April 25, the temperature dropping to 10 degrees below freezing. Oats were frozen back to the surface of the ground, and extensive damage was done to spring wheat, barley, sugar beets, garden crops, plums, and various shrubs. Alfalfa in some localities was badly frosted but alfalfa on the station was injured only slightly.

Visitors during the week were S. M. Saenko and M. I. Turnikov, agronomists from the U. S. S. R., and N. E. Hansen, of South Dakota State College.

Maximum temperature for the week, 58; minimum, 22; precipitation, 2.24 inches.

ARDMORE:

The rain of last week was the beginning of one of the best rainstorms in years. Precipitation continued almost steadily for three days and the total amount recorded for that time was 3.51 inches. There were times when the rain fell too rapidly to be absorbed, but during most of the time all of the moisture that fell was taken into the soil.

The rain was followed by a very severe freeze. The temperature fell to 20 degrees above zero the night of April 25 and remained below freezing for the next 24 hours. It was at first feared that small grains and alfalfa had been badly injured. The weather remained cloudy and cool for several days, and recovery after the freeze was much better than anticipated. Oats are the only grain crops to show a material amount of injury, and with oats the chief damage was on fields that had just emerged. In the variety test, Iowa and Markton oats showed more injury than other varieties.

Trees and ornamental shrubs were injured by the freeze and most of the fruit buds were killed.

The wind velocity for April is the highest on record. Until March of this year the highest monthly average recorded was 8.4 miles per hour. The average velocity for the first 29 days of April is 10.1 miles per hour. This high average velocity is not the result of a few days of excessive velocity, but of nearly continuous wind movement during the entire month. During the period from April 20 to 29, inclusive, the maximum velocity was 15.3 miles per hour and the minimum 12.2 miles per hour.

Ardmore, continued:

No field work was done as the surface soil remained wet the entire week. The weather remained so cool during the week that crops made very little growth. The soil is wet to the greatest depth since 1927, and prospects for crops of hay and grain are better than for several years.

Hat Creek was out of its banks for the first time since 1927. The road between the field station and town was under water a portion of one day.

Maximum temperature for the week, 55; minimum, 20; precipitation, 2.86 inches; total precipitation for April, 4.17 inches; the highest April precipitation on record at this station is 4.26 inches in 1915.

ARCHER:

During the week the weather has been cold and squally. The maximum temperature was 52 degrees and the minimum 18. Precipitation, totaling .26 inch, consisted for the most part of snow driven by heavy winds. The wetness of the snow and the warm soil caused some of it to stay placed but most of it is in drifts. The storm of April 23 blocked the Lincoln Highway. Cars coming from the east were blocked about five miles east of this station, causing about 150 people to remain in their cars all of Saturday night. Following the opening of the highway Sunday morning a large number of automobiles moved slowly toward Cheyenne.

Winter wheat, winter rye and the grasses seemed to be improved by the storm but the early-leafing shrubs received a severe setback by having their leaves frozen.

When the weather permitted, outside work consisted of fencing the new shelter-belt area, hauling manure, garden and repair work.

AKRON:

The drizzling rain reported last week continued with intermittent breaks all week. Near the middle of the week the precipitation was snow and on three successive nights the temperature descended to 22. The total precipitation, a little received each day except one, was 1.56 inches. This is a great boon to the agricultural outlook for this region.

Akron, continued:

Winter wheat is still unpromising. Spring-seeded small grains have emerged to good stands and are promising.

No field work was accomplished owing to the rains and to wet soil. Time was devoted to completing the proso nursery threshing, to cleaning up the grain storage room, and to cleaning out and hauling away of dead wood from among the shrubbery and border tree plantings.

J. M. Stephens is here this week end and expects to remain a few days longer.

Though the temperature was down to 22 on three successive nights, it does not now appear that the cherries have been injured. Plums are more uncertain.

Maximum temperature for the week, 55; minimum, 22; precipitation, 1.56 inch.

NORTH PLATTE:

Rainfall the last of last week and first of this totaled about 1.50 inches. This brings the total for April up to near the normal. Soil is wet from 12 to 18 inches in depth. Temperatures have remained low and wind persistent, so that vegetation has not made much headway.

Potatoes were planted on the 27th. Corn land will be prepared during the coming week. Pastures are starting slowly but stock is being put out quite generally on account of shortage of feed.

COLBY:

This has been a wet and cold week. Precipitation was recorded on seven of the last eight days, and on five nights the temperature has been near freezing. On the 26th the temperature dropped to 26 at about nine o'clock in the morning and remained below freezing nearly all day. During the time the temperature was below freezing the sky was cloudy, and the day following was cloudy and rainy. The precipitation was in the form of easy showers. At this station there was only a trace of sleet and snow, but 20 miles west of here about six inches of snow fell on the 27th.

Colby, continued:

No serious damage was done by the freeze. The leaves of the spring small grains, the young Russian thistles, the leaves on some of the trees, and other tender vegetation were nipped but not killed. Cherry, apple, and peach trees were mostly in full bloom at the time of the freeze, but the fruit buds escaped injury.

Pastures are green and the grass is growing rapidly. The winter wheat which survived the winter and the soil-blowing is making considerable growth, so that the bare spots are becoming quite conspicuous. All the plots in the new project appear promising, except the one that was plowed and not packed and the one next to it. The one that was not packed never had any wheat, except a few scattered plants, at any time. The one next to it, however had a fair stand until part of it was destroyed by soil blowing across it from the plot not packed.

In the old project there are bare spots, due to winterkilling and soil-blowing on nearly all of the fallow plots. On the continuously cropped plots there is practically no wheat except on those stubbled-in and those drilled in standing corn stalks. The stubbled-in plots, however, do not have very good stands, not as good as they appeared to have early in the spring. The wheat in the standing stalks looks much better than it did last fall and is improving every day.

Maximum temperature for the week, 62; minimum, 26; precipitation, 1.54 inches; for April, - Maximum temperature, 83; minimum, 23; precipitation, 2.05 inches; precipitation - average, 2.16 inches. Total precipitation, January 1 to April 30, 1932, 3.34 inches. Average precipitation, January 1 to May 1, 3.93 inches.

GARDEN CITY:

The past week has been ideal for small grains and other spring growth. Wheat is about six to eight inches high, and covers the ground completely in most places. Barley, oats and spring wheat are making good growth. Flax, seeded on April 2, is coming up to good stands and making rapid growth.

The fore part of the week was cold, windy and very disagreeable for field work, though such weather was a great help to many wheat fields that had suffered from blowing and were low in soil moisture. Rainfall varying from .02 to .93 inch has been recorded on five of the last seven days.

Garden City, continued:

Weed growth is beginning to get well started. Spring listing and plowing of fallow plots will start next week. General station work has consisted of plowing, leveling for irrigation, building fences and cleaning irrigation ditches.

Maximum temperature for the week, 83; minimum, 31; precipitation, 1.27 inches.

HAYS:

We have been having very fine growing weather for crops and pastures. Native grass will now furnish some pasture for livestock. Oats, barley, and spring wheat are looking fine although the growth is still small and is just beginning to spread and stool. Canada field peas are also looking fine. The plants are about three or four inches high but not yet making vines. Winter rye is about 12 inches high with heads in the boot. Rye has much the appearance of suffering from drought. It does not promise a heavy growth although there is a good thick stand. Bromegrass seeded the first of the month appears to have resulted in a failure, at least the stand is still too thin. The poor success in securing the stand, we believe, is due largely to not having used a corrugated roller more freely following the seeding. This was omitted this year because of the apparent extreme danger of soil blowing. Alfalfa is about six to eight inches high and looking fine. On bottom land the growth is both heavier and taller. Bromegrass is making a fine spreading growth which would now make excellent pasture.

The story of winter wheat is too long to write in detail. It varies from about 25 per-cent stand where continuously stubbled-in, with a very slender, puny growth to an extremely thick heavy growth, which if it stood up would be about 15 inches high on manured fallow ground. Any kind of a growth varying between these two extremes may be seen somewhere on the project. The plot continuously stubbled-in since 1912 is extremely poor as stated and the ground is well covered with grass. Another plot which has been continuously stubbled-in for only 7 or 8 years is very similar but not quite so poor. Another plot stubbled-in every other year alternating with plowing is free of grass and much better than those previously listed but is very poor. Another plot stubbled-in following wheat on fallow is still better but at present is not nearly as good as wheat on any of the prepared plots. Generally speaking the wheat sown on land where the preparation began early after harvest is very good and has a dark green color. On ground prepared late, regardless of the method, it has a much poorer growth and color.

Hays, continued:

Generally the wheat on fallow ground is all good - more growth than is desirable. There is, however, considerable difference in the growth on different blocks of fallow, with more difference than usual and without much apparent reason except on fallow where applications of barn yard manure were made, in which case the wheat is always heavier. The growth of the wheat on corn-stubble and kafir-stubble ground is not as good as the wheat on early prepared wheat land. The wheat on corn ground, however, is better and has some advantage over that on kafir-stubble ground. The wheat drilled in kafir stalks is not as healthy looking as that drilled on kafir-stubble ground.

The annual boys' and girls' judging contest occurred on Friday, April 29, and the annual Round-Up or Feeders' Day program occurred on Saturday. The showery weather which prevailed up to that time gave way for two very fine days for this occasion which resulted in a large attendance both days. There were 500 boys and girls present for the contest accompanied by many coaches and visitors. On Saturday the forenoon was devoted to showing the visitors the station and the afternoon included some excellent talks by Dean L. E. Call, Dr. McCampbell and Professor Kelly from the Kansas State College. Another program more interesting to the ladies was in session in another building at the same time. The attendance for Saturday was about 1,200.

The maximum temperature for the week was 85 degrees; minimum, 33. The weather during the past week has been generally cloudy and damp with small but measurable amounts of precipitation on four days and a trace on one other day. Total precipitation for the week was .49 inch on the Dry Land project and .64 inch at the station buildings. Incidentally it may be mentioned that the total precipitation on the project for the month was 2.04 inches and 2.32 inches at the station buildings.

TUCUMCARI:

The extremely high wind of last Saturday, April 23, was only a fore-runner of a week of contrasting climatic conditions. Velocity that day showed 31.1 miles an hour for three hours and 24.3 miles per hour for ten hours, both records on two-foot anemometer. This was one of the most severe winds in history and was general in character. Amarillo, Texas, 110 miles east of here, recorded from 35 to 74 miles per hour at varying altitudes, but as the storm increased the air was so dust-laden further readings could not be made.

Tucumcari, continued:

Considerable soil blowing occurred, but damage was not so severe as anticipated. On Tuesday night, April 26, a gentle rain turned to sleet and the following morning trees were coated with 1/4 to 3/8 inch of ice. Telephone, telegraph, and light wires were broken, while many trees were damaged. Chinese elm withstood the sleet very well, only some half dozen being split and most of those were individuals which were planted a year ago and had made exceptionally rapid growth. Minimum temperature was 29 and apparently no damage was done to fruit. A cold rain fell all day Wednesday, total precipitation for the 24 hours reaching 0.99 inch.

Thursday high wind movement necessitated cultivating a large portion of the station, including orchard, tree rows, vineyard, and much plot and increase land. Blowing of station soil was prevented by timely work.

Work of the week included listing increase land and grain sorghum series, seeding alfalfa, a large amount of field cultivating, planting evergreens, and miscellaneous wet-weather work.

The rain will prove of great benefit to ranges and to wheat fields on plains.

Maximum temperature for the week, 75; minimum, 29; precipitation, .99 inch; wind velocity, 6.3 miles per hour; evaporation, 1.482 inches.

DALHART:

The long needed precipitation for this section of the country came this week. A rain of 1.29 inches fell on Wednesday, April 27, as rather gentle showers. There was very little run-off, except from a few hard surfaces.

It has been possible since the rain to turn under some of the rye which was used for green manure and a cover crop. On one of these plots where the plowing is done to an approximate depth of 12 inches, in weed control work, very little dry dirt was thrown up.

This rain was preceded by a day and night of foggy, misty weather. The temperature, during this high-humidity period, reached a low of 29 degrees. Ice froze on the limbs, leaves and flowers. Most of the vegetation shows but little effect of the ice. A few leaves, usually at the growing point, and some of the iris flowers, show a scorching effect.

Dalhart, continued:

A rather cursory examination of the vineyard shows that most of the new growth which was started was completely frozen, while some was not injured. It is going to be necessary to watch the grape variety resistance and recovery during the coming week to this injury.

Ideal growing weather has been the rule since the rain. Maximum temperature for the week, 71, minimum, 29; precipitation, 1.34 inches; evaporation, 1.234 inches; wind velocity, 8.1 miles per hour.

BIG SPRING:

Two rains totaling 1.60 inches during the past week have improved planting conditions to a great extent, and most of the farmers will take advantage of this by starting their planters next week. Grass in pastures that were getting dry will now start to grow. Other sections of the County reported more rain than the Station received. Considerable hail damage to trees and shrubs has also been reported; a small amount of hail was received at the Station, but no damage was observed.

Station work until the rain had consisted of knifing beds in the increase fields, and since then the time has been devoted to cleaning the grounds, and cleaning and sorting planting seed.

The cattle feeding experiments, which are being conducted at this Station will be completed May 20. This will complete a 180-day period; at this time a Feeders' Day meeting will be held, and the results of the tests announced.

Maximum temperature for the week, 85; minimum, 48; precipitation, 1.60 inches.

LAWTON:

A cold wind that blew from the northeast for several days with considerably more than average velocity terminated with a gentle rain of 0.73 inch on the 27th. Threatening weather continued and a dashing rain of 0.50 inch was recorded on the 29th.

These rains are of very timely benefit to small grains, pasture lands and cultivated land that will be planted to row crops.

Lawton, continued:

Subnormal temperatures were prevalent during the week when the minimum ranged from 45 to 54 and the maximum from 59 to 79.

Broomcorn and sorgo were planted in the M. C. plots and sorgo was drilled in Rotations 274 and 275 on April 25.

Sweet clover that was seeded on the fertilizer project on the 23rd, is emerging and a fair stand seems probable.

Most of the wheat varieties are showing first heads and a few varieties are fully headed. Most of the varieties will average about 30 inches in height, but wheat on the rotation plots is considerably shorter in height.

Heading of winter oats progresses unevenly, much as it did last year. Spring oats have made but little growth and a few heads are visible on the February 9 seeding. It seems likely that spring seeded oats will head pretty short this year.

The total precipitation of 2.16 inches for April is 0.87 inch below normal.

WOODWARD:

Two slow-falling rains have occurred this week, totaling 1.39 inches, and as a consequence wheat has rushed into heading, making growth so rapid it could almost be seen.

Planting of grape cuttings, planting dates on soy beans, grading roads and building culverts, have made up the work of the week.

A disease as yet unidentified is attacking and in some cases killing the red cedars in this region, and the same disease or one with similar symptoms has killed several western yellow pines.

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